PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re application of

Kiyoaki EGAWA

Docket No: Q80674

Appln. No.: 10/809,364

Group Art Unit: 3652

Confirmation No.: 7561

Examiner: Micheal S. LOWE

Filed: March 26, 2004

For: STORAGE MEDIUM TRANSPORTING APPARATUS WITH AN IMPROVED TRANSMISSION MECHANISM FOR DRIVING A PICKER

APPEAL BRIEF UNDER 37 C.F.R. § 41.37

MAIL STOP APPEAL BRIEF - PATENTS
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In accordance with the provisions of 37 C.F.R. § 41.37, Appellant submits the following:

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I. REAL PARTY IN INTEREST

The real party in interest is NEC CORPORATION, the assignee of the present application. The assignment was recorded on March 26, 2004, at Reel 015154, Frame 0054.

II. RELATED APPEALS AND INTERFERENCES

Upon information and belief, there are no other prior or pending appeals, interferences or judicial proceedings known to Appellant's Representative or the Assignee that may be related to, be directly affected by, or have a bearing on the Board's decision in the Appeal.

III. STATUS OF CLAIMS

Claims 1-5 and 8-17 are all the claims pending in the application. Claims 1-5 and 8-17 stand finally rejected and are the subject of this Appeal. Claims 6-7 are canceled.

IV. STATUS OF AMENDMENTS

Prior to the Final Office Action issued August 12, 2008, Appellant filed an Amendment Under 37 C.F.R. § 1.111 dated May 5, 2008. That Amendment was entered as a matter of right. Accordingly, there are no outstanding, non-entered amendments of the claims.

V. SUMMARY OF THE CLAIMED SUBJECT MATTER

The present invention relates to an apparatus for transporting a storage medium from a holder to a storage device. *See* Specification, p. 3, lines 25-27.

The concise description of the claimed subject matter of the present invention is set forth below with regard to each of the respective independent claims 1, 16 and 17. Each of the following discussions includes reference to various portions of the present application to aid in the understanding of the invention. However, such reference, unless otherwise indicated, is intended to point out the described exemplary embodiment; it is not intended to limit the scope of the claims to only the express embodiment cited below.

Claim 1

Claim 1 relates to an apparatus for transporting a storage medium 2 from a holder 4 to a storage device 3, 5. *See* Specification, p. 11, lines 15-20; FIG. 1. The apparatus comprises a base 40 and a carriage 9 driven by a first driving force 7. *See* Specification, p.11, lines 24-27; FIGS. 2-3. The carriage 9 is movable relative to the base between the holder 4 and the storage device 3, 5. *See* Specification, p. 12, lines 1-10; FIGS. 2-3. A picker 10 is provided on the carriage 9 and driven by a second driving force 16. *See* Specification, p. 13, lines 1-5; FIGS. 12-13. The picker 10 selectively loads and unloads the storage medium 2. *See* Specification, p. 12, lines 8-10; FIGS. 2-3. A first driving device generates said first driving force 7 and a second driving device provided on the base 40 generates the second driving force. *See* Specification, p. 13, lines 20-27; FIGS. 2 and 8. The apparatus further includes a transmission 17 mechanism which transmits the second driving force from the second driving device 16 to the picker 10 allowing

movement of the carriage 9. *See* Specification, p. 14, lines 1-5; FIGS. 2 and 8. The picker 10 also has a gripper 12 which includes first and second parts 13, 14 which are linked to each other rotatably around an axis 13, 14. *See* Specification, p. 13, lines 3-10; FIGS. 13 and 14. The carriage 9 has cams 15a, 15b which make the gripper 12 open or close in response to the movement of the picker 10 and the first parts 14 move pivotally about the axis and opens for hooking notches 2a of the storage medium by the cams 15a, 15b. *See* Specification, p. 15, lines 1 through p. 16, line 6; FIGS. 13 and 14.

Claim 16

Claim 16 relates to a storage medium library system including one or more storage holders to hold storage media. *See* Specification, p. 11, lines 15-20; FIG. 1. The apparatus comprises a base 40 and a carriage 9 driven by a first driving force 7. *See* Specification, p.11, lines 24-27; FIGS. 2-3. The carriage 9 is movable relative to the base between the holder 4 and the storage device 3, 5. *See* Specification, p. 12, lines 1-10; FIGS. 2-3. A picker 10 is provided on the carriage 9 and driven by a driving force 16. *See* Specification, p. 13, lines 1-5; FIGS. 12-13. The picker 10 selectively loads and unloads the storage medium 2. *See* Specification, p. 12, lines 8-10; FIGS. 2-3. A driving device generates a driving force. *See* Specification, p. 13, lines 20-27; FIGS. 2 and 8. The apparatus further includes a transmission 17 mechanism which transmits the driving force from the driving device 16 to the picker 10 allowing movement of the carriage 9. *See* Specification, p. 14, lines 1-5; FIGS. 2 and 8. The picker 10 also has a gripper 12 which includes first and second parts 13, 14 which are linked to each other rotatably around an axis 13, 14. *See* Specification, p. 13, lines 3-10; FIGS. 13 and 14. The carriage 9 has cams 15a,

15b which make the gripper 12 open or close in response to the movement of the picker 10 and the first parts 14 move pivotally about the axis and opens for hooking notches 2a of the storage medium by the cams 15a, 15b. *See* Specification, p. 15, lines 1 through p. 16, line 6; FIGS. 13 and 14.

Claim 17

Claim 17 relates to an apparatus for transporting a storage medium from a holder to a storage device. *See* Specification, p. 11, lines 15-20; FIG. 1. The apparatus comprises a base means 40 and a carriage means 9 driven by a driving force 7. *See* Specification, p.11, lines 24-27; FIGS. 2-3. The carriage means 9 is movable relative to the base between the holder 4 and the storage device 3, 5. *See* Specification, p. 12, lines 1-10; FIGS. 2-3. A picker means 10 is provided on the carriage means 9 and driven by a driving force. *See* Specification, p. 13, lines 1-5; FIGS. 12-13. The picker means 10 selectively loads and unloads the storage medium 2. *See* Specification, p. 12, lines 8-10; FIGS. 2-3. A driving means 16 generates a driving force. *See* Specification, p. 13, lines 20-27; FIGS. 2 and 8. The apparatus further includes a transmission means 17 which transmits the driving force from the driving means 16 to the picker means 10 allowing movement of the carriage 9. *See* Specification, p. 14, lines 1-5; FIGS. 2 and 8. The picker means 10 also has a gripper means 12 which includes first and second parts 13, 14 which are linked to each other rotatably around an axis 13, 14. *See* Specification, p. 13, lines 3-10; FIGS. 13 and 14. The carriage means 9 has cams 15a, 15b which make the gripper means 12 open or close in response to the movement of the picker means 10 and the first parts 14 move

pivotally about the axis and opens for hooking notches 2a of the storage medium by the cams 15a, 15b. *See* Specification, p. 15, lines 1 through p. 16, line 6; FIGS. 13 and 14.

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

(1) Claims 1-3 and 11-17 stand rejected under 35 U.S.C. § 103(a) as obvious over Takeshi (2002-025167) in view of Yosheida (US 4,655,662).

(2) Claims 4, 5, and 8-10 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Takeshi (2002-025167) in view of Yosheida (US 4,655,662) and Ono (JP 03-147564).

VII. ARGUMENT

Appellant respectfully requests reconsideration of the present claim rejections in view of the comments presented below. Independent claims 1, 16 and 17 stand together.

Claim Rejections - 35 U.S.C. § 103(a)

Claims 1-3 and 11-17 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Takeshi (JP 2002-025167) in view of Yoshieda (US 4,655,662).

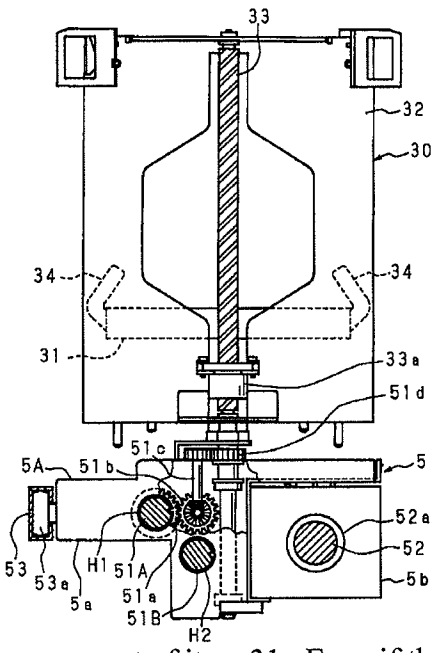
In summary, Appellant respectfully submits Takeshi fails to disclose the recited relationship between the gripper and the picker. Rather, Takeshi is silent with regard to any movement of portion 34 with respect to portion 31, which the Examiner relies on as disclosing the recited gripper and picker, respectively. Moreover, none of the other applied references compensate for these deficiencies.

Claim 1 recites, *inter alia*, `wherein said carriage has cams which make said gripper open or close in response to the movement of said picker.`

These features of claim 1 relate to an aspect wherein cams make the gripper open or close in response to the movement of the picker. Thus, as recited in claim 1, movements of the picker and gripper are mechanically related via the cam structure.

In the rejection, the Examiner asserts Takeshi discloses the above feature of the present invention because the "gripper opens and closes to grab and release the storage medium 9 only at the location of the medium, since the gripper only gets to that spot by movement of the picker

and its associated cams/mechanism 33, 38, etc., then it is taught that the gripper opens and closes in response to the picker's movement and the cams/mechanism associated with that movement." *See* Office Action, p. 3. Notably, the Examiner merely alleges that Takeshi discloses "cams/mechanisms associated with that movement." Appellant submits that even if Takeshi discloses cams associated with this movement, it does not disclose cams which cause item 34 to open/close in response to the movement of item 31.



Generally, Takeshi fails to disclose any cam which make a gripper open or close in response to the movement of a picker. With reference to FIG. 4 (reproduced here), the Examiner associates item 34 with the gripper and item 31 with the picker. However, Takeshi fails to disclose <u>any cam</u> which cause item 34 to open and close in response to the movement of item 31. Even if the Examiner could identify other cams which cause item 31 to move, nowhere is there shown or disclose a cam which causes the item 34 to open and close in response to item 31.

Secondly, the Examiner's assertion only shows some sequential/time-series relationship, but not mechanical relationship, which "make the gripper open or close in response to the movement of the picker," between the movements of gripper and picker. In Takeshi, the movement of the gripper does not necessarily take place even when the picker moves.

Therefore, Takeshi neither teaches nor suggests the above-described structure as recited in claim 1.

Moreover, Yoshieda fails to compensate for Takeshi's deficiencies. Specifically, Yoshieda discloses a gripper mechanism 10 for feeding elongate strips which includes a gripper 17 composed of a pair of gripping jaws 18 and 19. However, in Yoshieda et al., the movement of the gripper 17 is not related to the movement of the gripper mechanism 10 which allegedly would correspond to the picker recited in claim 1. Thus, Yoshieda also fails to disclose any mechanical relationship between the movements of gripper and picker. Therefore, even if combined with Takeshi, the applied combination fails to disclose or even fairly suggest all the features recited in claim 1.

Thus, Appellant submits claim 1 is allowable for at least this reason. Additionally, because claims 16 and 17 recite features similar to the features of claim 1 discussed above, Appellant submits these claims are allowable for the same reasons set forth above. Finally, Appellant submits claims 2-3 and 11-15 are allowable, at least by virtue of their dependency.

Claim Rejections - 35 U.S.C. § 103(a)

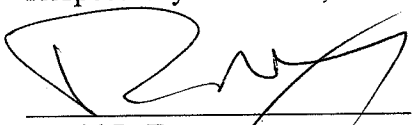
The Examiner rejected claims 4, 5 and 8-10 under § 103(a) as being unpatentable over Takeshi in view of Yoshieda and Ono (JP 03-147564). Appellant traverses this rejection as follows.

Because Ono fails to compensate for the above noted deficiencies of Takeshi and Yoshieda as applied to claim, Appellant submits claims 4, 5 and 8-10 are allowable, at least by virtue of their dependencies.

Conclusion

The USPTO is directed and authorized to charge the statutory fee (37 C.F.R. §41.37(a) and 1.17(c)) and all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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Date: April 13, 2009

CLAIMS APPENDIX

CLAIMS 1-5 and 8-17 ON APPEAL:

1. An apparatus for transporting a storage medium from a holder to a storage device, said apparatus comprising:

a base;

a carriage driven by a first driving force, said carriage being movable relative to said base between said holder and said storage device;

a picker provided on said carriage and driven by a second driving force, said picker selectively loading and unloading said storage medium;

a first driving device generating said first driving force;

a second driving device provided on said base and generating said second driving force; and

a transmission mechanism transmitting said second driving force from said second driving device to said picker allowing movement of said carriage,

wherein said picker has a gripper which includes first and second parts which are linked to each other rotatably around an axis,

wherein said carriage has cams which make said gripper open or close in response to the movement of said picker,

wherein said first parts move pivotally about said axis and opens for hooking notches of said storage medium by said cams.

2. An apparatus according to claim 1, wherein said transmission mechanism comprises a rotary shaft and a coupling device, and said coupling device is provided on said carriage and transmits torque from said rotary shaft to said picker allowing relative movement between said rotary shaft and said picker along a longitudinal axis of said rotary shaft.

3. An apparatus according to claim 2, wherein said rotary shaft has a convex portion in cross section, said coupling device has a concave portion in cross section, and said convex portion of said rotary shaft fits said concave portion of said coupling device.

4. An apparatus according to claim 3, wherein said rotary shaft has a polygonal shape in cross section.

5. An apparatus according to claim 4, wherein said rotary shaft has a rectangular shape in cross section.

8. An apparatus according to claim 1, wherein said transmission mechanism comprises a belt and a gear, said belt allows relative movement between said second driving device and said picker, and said gear is provided on said carriage and transmits driving force from said belt to said picker.

9. An apparatus according to claim 8, wherein said belt is elastic.

10. An apparatus according to claim 9, wherein said belt comprises a spring.

11. An apparatus according to claim 1, wherein said picker comprises a gripper assembly grasping said storage medium.

12. An apparatus according to claim 11, wherein said picker comprises a support structure translating, said gripper assembly in a direction toward and away from said holder.

13. An apparatus according to claim 12, wherein said gripper assembly comprises an arm and a guide guiding said arm, said arm selectively assumes an open position and a closed position, said guide has a curved portion such that said arm moves from said closed position to said open position as said arm approaches said holder and said arm moves from said open position to said closed position as said arm retreats from said holder.

14. An apparatus according to claim 1, wherein said holder is a library.

15. An apparatus according to claim 1, wherein said storage medium is housed in a cartridge.

16. A storage medium library system comprising:

one or more storage holders which holds storage media;

a base;

a carriage driven by first driving force, said carriage being movable relative to said base between said holder and a storage device;

a picker provided on said carriage and driven by a driving force, said picker selectively loading and unloading a storage medium;

a driving device provided on said base, for generating said driving force; and

a transmission mechanism transmitting said driving force from said driving device to said picker allowing movement of said carriage,

wherein said picker has a gripper which includes first and second parts which are linked to each other rotatably around an axis,

wherein said carriage has cams which make said gripper open or close in response to the movement of said picker,

wherein said first parts move pivotally about said axis and opens for hooking notches of said storage medium by said cams.

17. An apparatus for transporting a storage medium from a holder to a storage device, said apparatus comprising:

a base means;

a carriage means for being movable relative to said base means between said holder and said storage device;

a picker means provided on said carriage and driven by a driving force, for selectively loading and unloading said storage medium; and

a transmission means for transmitting said driving force from said driving means to said picker means allowing movement of said carriage means,

whererin said picker means has a gripper means which includes first and second parts which are linked to each other rotatably around an axis,

wherein said carriage means has a cam means which makes said gripper means open or close in response to the movement of said picker means,

wherein said first parts move pivotally about said axis and opens for hooking notches of said storage medium by said cams.

EVIDENCE APPENDIX:

Pursuant to 37 C.F.R. § 41.37(c)(1)(ix), submitted herewith are copies of any evidence submitted pursuant to 37 C.F.R. §§ 1.130, 1.131, or 1.132 or any other evidence entered by the Examiner and relied upon by Appellant in the appeal.

None.

RELATED PROCEEDINGS APPENDIX

Submitted herewith are copies of decisions rendered by a court or the Board in any proceeding identified about in Section II pursuant to 37 C.F.R. § 41.37(c)(1)(ii).

None.

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SUBMISSION OF APPEAL BRIEF

MAIL STOP APPEAL BRIEF - PATENTS
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Submitted herewith please find an Appeal Brief. The USPTO is directed and authorized to charge the statutory fee of $540.00 and all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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